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## Korea, Republic of

### Product Brief

### Korean Potato Market

### 2003

**Approved by:**

Daryl A. Brehm  
ATO Seoul

**Prepared by:**

Morgan Haas

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**Report Highlights:**

In Korea, consumption of potato and potato products is growing faster than domestic production and, as a result, imports are taking a larger share. The four countries controlling potato sectors in Korea are Australia, Germany, Japan, and the United States. The largest threat to U.S. products in Korea is Canada in the prepared-frozen potato sector. The greatest potential for U.S. exporters is in the fresh and dehydrated potato sectors.

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Seoul ATO [KS2]  
[KS]

## I. Market Overview

### Domestic Market

In recent years, acreage planted to potatoes in Korea has dwindled; however, marginal increases in yields have kept production levels fairly constant.

South Korea Potato Production					
	1998	1999	2000	2001	2002
Production (tons)	561,985	678,305	704,623	603,627	666,173
Cultivated Area (Ha)	23,252	27,657	29,415	24,691	24,673

Local production remains the main source of in-season fresh potato stock. Consumption of potato and potato products are growing faster than domestic production and, as a result, imports are taking a larger share of the potato market. In 2000, only 40% of local production was used for processing. The two sectors with most potential for US growth are fresh and dehydrated potatoes.

Steady year-round demand for processed potatoes drives imports during the local off-season. The food-processing sector in Korea is very well developed, especially in regards to snack foods, 60% of which are potato chips made from fresh potatoes, primarily using the Atlantic variety. Potato chip sales in Korea grew from \$166.5 million in 1998 to \$213.8 million in 2001, an increase of 28%.

Dehydrated potatoes are also becoming extensively used within this market and work well to meet the accommodations of the health conscience consumer. Koreans have become more adept at choosing a product containing little to no additives that is fresh or natural, practical food, and food with limited calories.

### Competitors

The four countries controlling potato sectors in Korea are Australia, Germany, Japan, and the United States. A few small and stable sectors within the Korean potato market include the following: frozen, dried, and starch. Currently, the US holds 97% of the \$1.25 million frozen potato sector and 82% of the \$225,000 dried potato sector. In both sectors, China is our only competitor. The US has virtually no role in Korean starch imports, where Germany holds 90% market share.

Characteristics of US Potatoes in Korea	
Advantages	Challenges
Chipping stock has low starch ratios that reduce browning and prevent sweetened chip flavor.	US potatoes not seen as fresh since Korea and US share their off-season together.
Increased use of potato products in Western restaurants.	Little knowledge of US varieties and growing, storage, and shipment techniques that preserve high quality
Versatility in food preparation	Little knowledge of potato cooking possibilities
Growing snack food market	High priced US products
Unfilled Quotas	Prohibited export regions
Decreasing market access constraints	Phytosanitary regulations
Well established US name in many sectors may lead to improved trade in poorly supplied sectors	Empty returning ships cause high shipping fees
No GM labeling required for US potatoes	

## II. Market Sector Opportunities and Threats

### Fresh & Seed Potatoes

Korea imported 11,133 tons (\$3.8 million) in 2002. The Australians currently maintain roughly 95% of the market share for fresh potatoes. The Korean government limits imports of fresh and seed potatoes to only certain times of the year. This generally takes place from January to May when the local farmers are out of season and processors must keep their plants running to fill demand. Under current regulations, only parts of Australia, Japan, the US are currently allowed to export fresh & seed potatoes to Korea.

In the future, the US is expected to gain a larger share of the fresh potato market, primarily from chip processors. The US has recently been trying to break into the fresh potato sector but has been long perceived to have seasonality constrictions on supply. Market promoters have been educating Korean processors on the US' advanced growing, storage, and shipment techniques that preserve high quality and consistency along with on a number of varieties. These varieties are associated with various favorable chipping characteristics, such as the traditional low starch content that aids in preventing undesirable sweetening and browning that can occur after processing. Shipping costs to Korea are of little concern since costs of US potatoes shipped from the Pacific Northwest are similar to that of the Australians.

In respect to seed, the Japanese have been the sole exporters of seed to Korea since 1999, likely due to their close proximity. Koreans have been purchasing anywhere from \$150,000 to \$375,000 in seed since 1999 from Japan. Future seed imports from the US remain unknown; however, if processors begin to demand US potato varieties, producers may look to import seed from the US for domestic production.

There are many phytosanitary/sanitary issues in the fresh and seed potato sectors. Parts of the potato producing areas within Australia, Japan and the United States have been prohibited to export to Korea due to pest control problems. Included in this list are eighteen US states for the following pests: potato wart disease, potato spindle tuber viroid, golden potato cyst nematode, and white potato cyst nematode. Tubers originating from states not on the list and Puerto Rico must acquire a phytosanitary certificate license if they wish to export. States approved by the Ministry of Trade & Industry to export potatoes to Korea currently include Washington, Idaho, Oregon, and Alaska. Animal & Plant Health Inspection Service (APHIS) is currently in discussions for gathering an updated pest list. This would include the elimination of some prohibited states, eliminating pests from the list that have been eradicated in the US, and getting notification of any unlisted pests Korea is actively prohibiting without our current knowledge. There is also a list of numerous pests found to be minor concerns such as verticillium tenerum that allow the Korean authorities to block shipments entering the country. Under sanitary conditions, any foreign materials, including dirt, must be absent from shipment.

### Dehydrated & Prepared-Unfrozen

The dehydrated potato sector is currently small due to the market access constraints that have kept demand in check. In 2002, the flour sector, like many sectors, was affected by the short supply of US potatoes available for processing; however, the US maintained roughly 75% market share of the \$125,000 sector. Potato flakes are not being exported to Korea often but instead imported as a mixed product. The opportunity for dehydrated potatoes remains strong because of broad application possibilities yet to be explored, particularly in the snack food and bakery sectors. Dehydrated potatoes will remain dependent on the innovation of new uses in products.

In response to the low quotas set for dehydrated potatoes, many processors are mixing dehydrated potatoes with other ingredients to form a prepared product. The drawback to this practice is the product's end use versatility is limited. Imports of non-flake products have risen at a 9% annual growth due to increased use of dehydrated products and their reduced market access constraints. In total, prepared-unfrozen imports in 2002 were 4,507 tons, of which 4,209 tons were from the US and mostly non-flake products. The US represented 95% market share of 2002 imports, where Korean imports totaled \$6.2 million and \$93,000 for non-flake and flake products respectfully.

Two labeling questions have occurred concerning whether a product should be listed as dehydrated or prepared-unfrozen potatoes. There are two discrepancies in definitions of these two products between the Korean Customs Service's (KCS) policy and the World Customs Organization's Tariff System. One, the Harmonized Tariff System does not allow for the exclusion of any substances when determining which label to assign a product; however, the KCS states additives consisting of less than 1% of total weight need not be accounted for when determining labeling. And two, the Harmonized Tariff System sets no minimum limitations of additives that must be present in a mix to list it as prepared, where the KCS sets a minimum of 10% additives that must be present in the mix to label it prepared. This problem has been addressed, but no solution has been provided at this time. Therefore, in order to import products under the prepared label, one must adhere to the stricter KCS guidelines of not counting additives under 1% total weight while maintaining a minimum of 10% additives present in the prepared mixture.

### **Prepared-Frozen**

Growing rampant throughout the 1990's, growth in the sector has leveled since 2000. The \$33 million sector is comprised of the US and Canada as the major competitors in Korea. Since 2000, the US has been consistently losing market share to Canada; the US currently holds 84% market share.

Prepared frozen potatoes, mostly fries, are imported in large amounts by the hotel, restaurant, and institution (HRI) sector and used extensively in restaurants. This market has expanded in direct response to popularity of western food and franchises, primarily HRI growth in Seoul, Busan, and Daegu. The HRI sector has also diversified the uses of processed-frozen potatoes, broadening applications and allowing for sector expansion.

## **III. Costs and Prices**

The prices paid for potatoes and their products vary dramatically when comparing imports from the US and its worldwide competitors. Shortages from the US tend to also shift the entire market; like in 2002, dehydrated potatoes were very expensive in response to the 2001 shortage. Chipping potatoes vary on the season but remain near \$.42/kg (W500/kg). Gains are to be made in processing potatoes. Potato sludge, the byproduct from starch production, is used heavily in Korean fertilizer. This starch production also plays a heavy role in determining the local Korean price for potatoes.

Average Price Paid By Korean Importers 2002 CIF						
HS Code	Description	Total Qty Imported (tons)	US Qty Imported (tons)	US Imports (\$/kg)	Non-US Imports (\$/kg)	Worldwide Imports (\$/kg)
0701.10.0000	Seed	172	-	-	1.99	1.99
0701.90.0000	Fresh	11,133	344	.69	.33	.34
0710.10.0000	Frozen	1,085	1,039	1.17	.89	1.16
0712.90.2093	Dried	147	97	1.72	.72	1.38
1105.10.0000	Flour	92	61	1.42	1.17	1.33
1105.20.0000	Flakes 1/	2	2	.52	-	.52
1108.13.0000	Starch	31,751	0	-	.46	.46
1901.90.9099	Prep (Other)	17,104	529	1.88	.57	.61
2004.10.0000	Prep-Frozen	41,696	34,971	.79	.77	.79
2005.20.1000	Prep-Unfrozen (Flake)	72	54	1.48	.72	1.29
2005.20.9000	Prep-Unfrozen (Non-Flake)	4,435	4,155	1.43	1.08	1.41

1/ Flakes were not imported in 2002. The price and quantity listed is from 2000.

## V. Market Access

### Tariffs

For the most part, tariff rate quota's (TRQ) are becoming less of a constriction every year. The TRQ for fresh potatoes is governed by the Ministry of Agriculture & Forestry and issued through the Agricultural Marketing & Fisheries Corporation (AFMC). AFMC gives preference to chipping potato importers over table stock. For the 2002 TRQ, the AFMC set aside 12,366 tons of the available 17,138 tons for processing. Otherwise, AFMC allocates TRQ's on a first-come, first-serve basis. This is a direct reaction from fresh potatoes for consumption not being price competitive in the Korean market and a lack of areas challenging domestic potatoes for sale. AFMC is also responsible for allocating quotas among dehydrated potato importers. The quota on dehydrated potatoes this year was recently increased from its published level of 10 tons; a similar occurrence in 2004 may also transpire. The National Agriculture Cooperative Federation (NACF) allocates the quota on among starch importers. No tariff schedule has been set for 2005.

Current Applicable TRQ's w/ Historic Quota Usage									
		2002		2003			2004		
					Tariff			Tariff	
HS Code	Description	Quota (tons)	Imports (tons)	Quota (tons)	In-Quota	Out-Quota	Quota (tons)	In-Quota	Out-Quota
0701.10.0000	Seed	1,729.1	172.0	1,813.5	0.0%	307.4%	1,898.0	0.0%	304.0%
0701.90.0000	Fresh	17,138.0	11,132.6	17,974.0	30.0%	307.4%	18,810.0	30.0%	304.0%
0710.10.0000	Frozen	-	1,085.2	-	27.3%		-	27.0%	
0712.90.2093	Dried	-	147.3	-	27.3%		-	27.0%	
1105.10.0000	Flour 1/	60.0	91.6	60.0	5.8%	307.4%	10.0	5.4%	304.0%
1105.20.0000	Flakes 1/		0.0		5.8%	307.4%		5.4%	304.0%
1108.13.0000	Starch 2/	84,220.0	31,750.8	44,945.3	8.0%	460.1%	45,692.0	8.0%	455.0%
1901.90.9099	Prep (Other)	-	17,104.1	-	5.0%		-	5.0%	
2004.10.0000	Prep-Frozen	-	41,695.6	-	19.2%		-	18.0%	
2005.20.1000	Prep-Unfrozen (Flake)	-	72.0	-	20.0%		-	20.0%	
2005.20.9000	Prep-Unfrozen (Non-Flake)	-	4,434.9	-	20.0%		-	20.0%	

1/ The Quota reflects any combination of Flour and Flakes that equal 60 tons. This quota was recently increased from the original 10 tons limit earlier this year

2/ The Quota reflects the total amount of Starch and 7 other products imported

### GM Labeling Regulations

The US is currently not growing genetically modified potatoes and for that reason no labeling is required for the export of fresh or seed potatoes; however, importers from Australia and Japan that cannot certify their product is GMO free must label their product "may contain GM products." It has been proposed to extend this regulation to processed potatoes also, but no official word has been made.

## VI. Key Contacts and Further Information

For further information or assistance on the Korean potato market, please contact:

US Agricultural Trade Office  
 Tel: (011-82-2) 397-4211/4188  
 Fax: (011-82-2) 720-7921  
 Email: ATO Seoul@fas.usda.gov  
 ATO Homepage: www.atoseoul.com  
 FAS Homepage: www.fas.usda.gov

**Local Address:**  
 US Agricultural Trade Office  
 #303, Leema Building  
 146-1, Susong-dong, Chongro-ku  
 Seoul 110-140, Korea

**APO Address for mail from US:**  
 US Embassy Seoul  
 Unit 15550 – ATO  
 APO, AP 96205-5550

